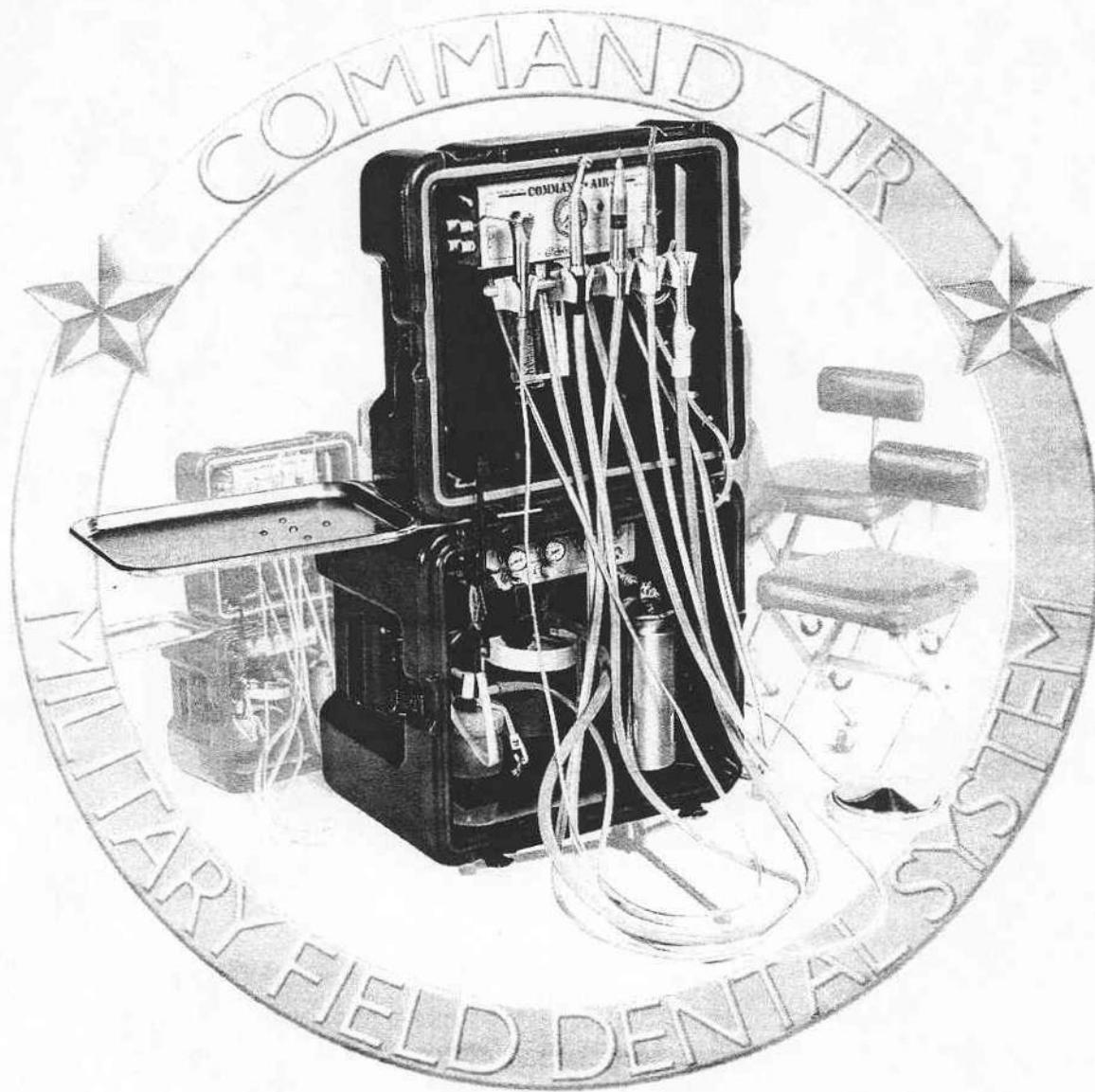


# SERVICE MANUAL & PARTS LIST

**ADU-10CF**

**(NSN: 6520-01-456-7170) Part 1 of 2**



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## TABLE OF CONTENTS

General Service Information .....	3
Inspection & Verification .....	3
Cleaning & Lubrication .....	3
Dis-Assembly .....	4
Handpiece Control/Delivery Head .....	4
Vacuum System/Water System Control .....	4
Fiber Optic System .....	5
TA-97 3-Way Syringe .....	6
Troubleshooting Chart .....	8
System Schematic; Handpiece Control .....	10
System Schematic; Vacuum Control .....	11
<b>Illustrated Parts List</b>	
Handpiece Control .....	12
Vacuum Control .....	13
Case Components .....	14
HVE & Saliva Ejector Assembly .....	15
NWS-6 Water System .....	16
TA-97 Autoclavable 3-Way Syringe .....	17
AA-42 Standard Disc Foot Control .....	18
Air Supply Line Assembly .....	19
Swivel Tray Assembly .....	20
KaVo Fiber Optic System .....	21
<b>Parts List</b> .....	22
<b>Specifications</b> .....	27

## TABLE OF ILLUSTRATIONS

Handpiece Control/Delivery Head .....	4
Vacuum System/Water System Control .....	4
Fiber Optic System .....	5
3-Way Syringe .....	6
System Schematic, ADU-10CF Handpiece Control .....	10
System Schematic, ADU10CF Vacuum Control .....	11
Illustrated Parts List, Handpiece Control .....	12
Illustrated Parts List, Vacuum Control .....	13
Illustrated Parts List, Case Components .....	14
Illustrated Parts List, HVE & Saliva Ejector Assembly .....	15
Illustrated Parts List, NWS-6 Water System .....	16
Illustrated Parts List, TA-90 Autoclavable 3-Way Syringe .....	17
Illustrated Parts List, AA-42 Standard Disc Foot Control .....	18
Illustrated Parts List, Air Supply Line Assembly .....	19
Swivel Tray Assembly .....	20
KaVo Fiber Optic System .....	21



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## **GENERAL SERVICE INFORMATION**

This service and parts manual offers information and parts lists not available in the ADU-10CF Operation and Maintenance manual. It will help you better understand how the ADU-10CF Portable Field Dental Unit works, thereby reducing service time. Exploded parts drawings and schematics show components in their actual places in the unit relative to one another. Tubing is coded by color tone and line thickness, and all parts are called out by Aseptico part number, then listed in reverse numerical order in the Parts List. Parts marked as "Commercial" are those items that can be purchased at retail hardware stores, and minimize service delays when obtained locally. Use the information in the Parts List when ordering replacement parts.

### **Inspection & Operation Verification**

To verify that the ADU-10CF unit is functioning properly, connect the unit to a clean compressed air source providing 60-80 PSI. Switch the master On/Off toggle to the on position. The master pressure gauge and "On" indicator should indicate pressure. When the water system is attached and turned on, water canister should pressurize. Depress foot control and observe drive air pressure from the highspeed line, and lowspeed line when selected. Depress the air/water buttons on the three-way syringe. Syringe should spray both air and water. With vacuum waste containers attached to the system, lift the HVE and Saliva Ejector valve from their auto holders with lock out switch in the on position. Vacuum should switch on, and vacuum generated at each valve.

While system is pressurized, inspect the unit for air or water leaks that could degrade or eliminate performance. Air filter/water separator drain should be closed, and air filter element inspected. Element should be replaced when pressure drop across the unit exceeds 10psi differential pressure. Water canister should be holding pressure at the lid, and the lid gasket inspected. Gasket may require lubrication or replacement for a proper seal. Inspect the water filter on the water pick-up tube. Water filter requires replacement if it becomes clogged and restricts water flow. Vacuum waste container lids should be sealed and holding a vacuum when in operation. HVE solids collector screen should be inspected for blockage and cleaned or replaced if necessary.

The above describes a basic inspection & verification of the ADU-10CF system. If the unit still does not perform as required, further diagnosis of settings and components in the system may require service. Use the troubleshooting section as a guide to symptoms and appropriate procedures to fix various problems.

### **Cleaning and Lubrication**

When servicing the ADU-10CF dental unit, the parts of any component disassembled should be thoroughly cleaned and inspected before re-assembly. A hot detergent solution is an effective cleaner. Flush all parts with clear, hot water. Abrasive cleaners have the potential to damage surface finishes and should be avoided. Any wiping should be done with a soft, lint free cloth.

Use a silicone base lubricating grease such as Dow Corning No.103 to lubricate internal moving parts, o-rings, oral evacuator valves, and seals in the ADU-10CF unit. Before performing any re-assembly of parts that contain o-rings or seals, apply a light coat of silicone grease. This will make installation easier and prevent the o-rings or seals from being damaged.

## DIS-ASSEMBLY

### Handpiece Control/Delivery Head (Reference Figure 1)

Most all service to the Handpiece Control/Delivery Head can be accessed by removing the front cover (P/N 460311-08). To remove front cover, use a 5/64" Hex wrench to loosen and remove the two 6-32x1/4" socket screws beneath the front edge. Pull front cover straight off rear alignment pins. Disconnect pressure gauge and On/Off Indicator lines to completely remove front cover.

If the entire Handpiece Control/Delivery Head assembly must be removed from the case, locate the four mounting screws behind the Handpiece Control/Delivery Head on the back of the case. To remove Handpiece Control/Delivery Head assembly, use a 1/8" Hex wrench to loosen and remove the four 10-32x1/2" socket screws and #10 sealing washers. Support the Handpiece Control/Delivery Head assembly while removing mounting screws.

Re-assembly is done in the reverse order. Replace sealing washers when mounting Handpiece Control/Delivery Head assembly. Align front cover with rear alignment pins when replacing.

### Vacuum System/Water System Control (Reference Figure 2)

To gain access to internal parts of the Vacuum/Water System Control, you must remove the assembly from its mounting position in the case. Locate the four mounting screws on the top of the case above the Vacuum/Water System Control. To remove Handpiece Vacuum/Water System Control assembly, use a 1/8" Hex wrench to loosen and remove the four 10-32x1/2" socket screws and #10 sealing washers. Support the Vacuum/Water System Control assembly while removing mounting screws.

To completely remove the Vacuum/Water System Control from the case, you must disconnect the vacuum pick-up tubes, the 3/8" air supply line, the 1/4" handpiece air supply line, and the air pilot signal lines. (Reference Figure 2A)

Re-assembly is done in the reverse order. Replace sealing washers when mounting Vacuum/Water System assembly. Reattach supply tubes per vacuum control schematic. (Reference Figure 2A)

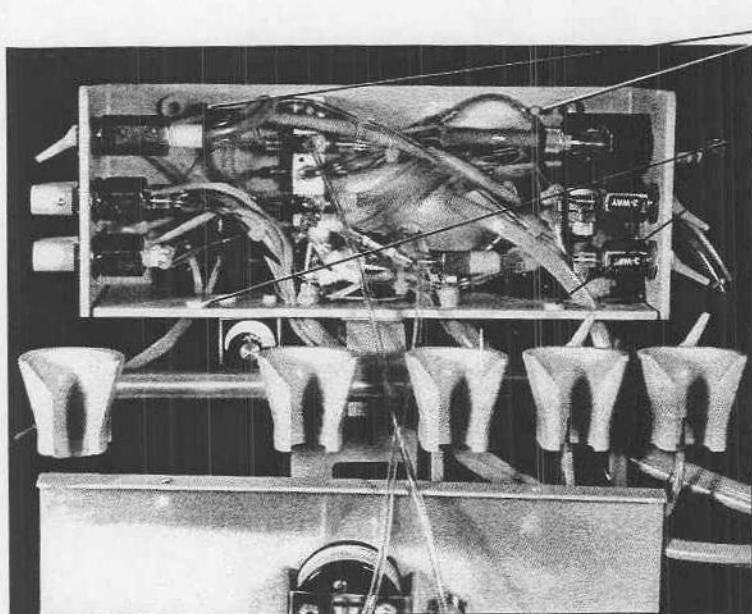


Figure 1  
Handpiece Control/Delivery Head

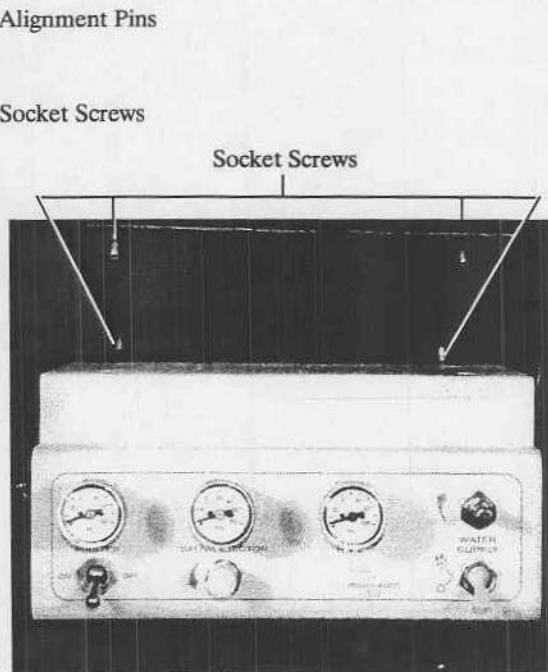


Figure 2  
Vacuum System/Water System

### Fiber Optic System (Reference Figure 3)

The ADU-10CF is equipped with a KaVo LCM Fiber Optic Handpiece Lighting System. The LCM Control Module, Remote Intensity Control, and/or the KaVo LCM Handpiece tubing may require removal for service or replacement.

To remove the Remote Intensity Control, unscrew the two 4-40x1/4" socket screws holding the Remote Intensity Control bracket underneath the delivery head. Unplug the Remote Intensity Control cable from the LCM control jack marked "INT". Reassembly is done in the reverse order.

To remove the KaVo LCM Handpiece Tubing from the unit, first remove the Handpiece Control/Delivery Head front cover as described in the first paragraph of this section. With a small blade screwdriver, loosen holding screws for the low voltage handpiece tubing wires connected to the LCM control, position No. 4. Carefully slide the wires out of the delivery head. Remove the handpiece tubing Drive Air, Coolant Air, and Coolant Water tubes from their connections inside the Handpiece Control/Delivery Head (reference Fig. 1A-System Schematic). Remove tubing for replacement. Reassembly is done in the reverse order.

To remove the KaVo LCM Fiber Optic Handpiece control box, first unplug the transformer cable, and Remote Intensity Control cable from the LCM control box. Disconnect the red 1/8" Fiber Optic Signal Air tube from the LCM control box at the position marked "HP4". With a small blade screwdriver, loosen holding screws for the low voltage handpiece tubing wires connected to the LCM control, position No. 4(reference Fig. 12A-Fiber Optic System Schematic). Remove the two 6-32 Hex Nuts holding the LCM control box to the mounting bracket in the unit beneath the Handpiece Control/Delivery Head. Remove LCM control box for service or replacement. Reassembly is done in the reverse order.

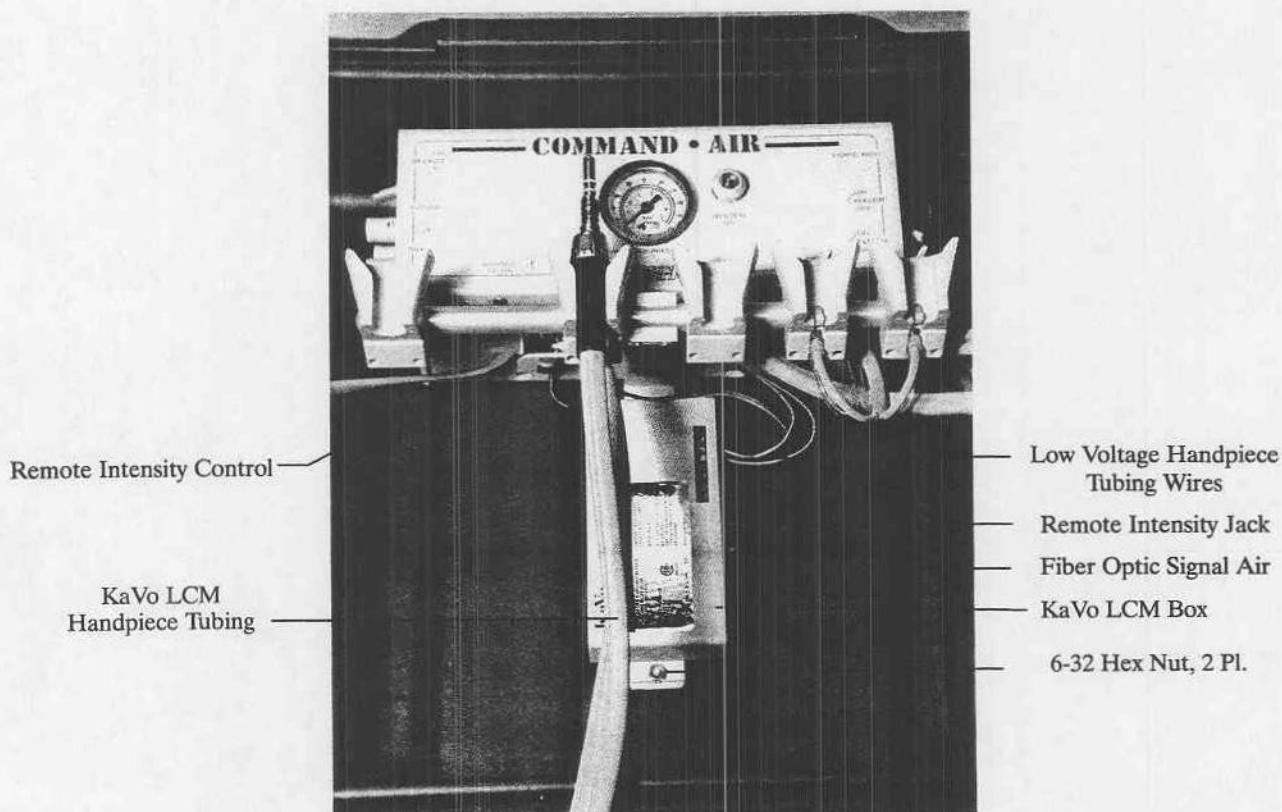


Figure 3  
Handpiece Control/Delivery Head  
With Fiber Optic System

### TA-97 3-Way Syringe

The TA-97 Autoclavable Syringe is engineered for dependability. The troubleshooting table gives the corrective action to be taken for the problems you may encounter.

Problem	Solution
Leakage around button	Replace valve button O-ring
Leakage from syringe tip	Replace valve core
Momentary spray of water when air button is pressed	(A) Damaged syringe tip end; Replace tip (B) Replace the small O-ring located behind the quick-change adapter.
Leakage from the syringe handle	Replace the O-rings on the Q.D. cartridge tip. If leakage persists, Replace Q.D. cartridge internal O-rings.
Constant mist when the water button is pressed	Replace the small O-ring on the Q.D. cartridge tip.

### Repair Of TA-97 Syringe

Most service that will ever be needed can be easily done, Using the tools and parts in the Autoclavable Syringe Valve O-ring Kit (Part No. TA-970K).

### Lubricant

All of the internal O-rings and valve seals will perform better if lightly coated with All Purpose Silicone. Anytime you replace O-rings, they should be lubricated before installation.

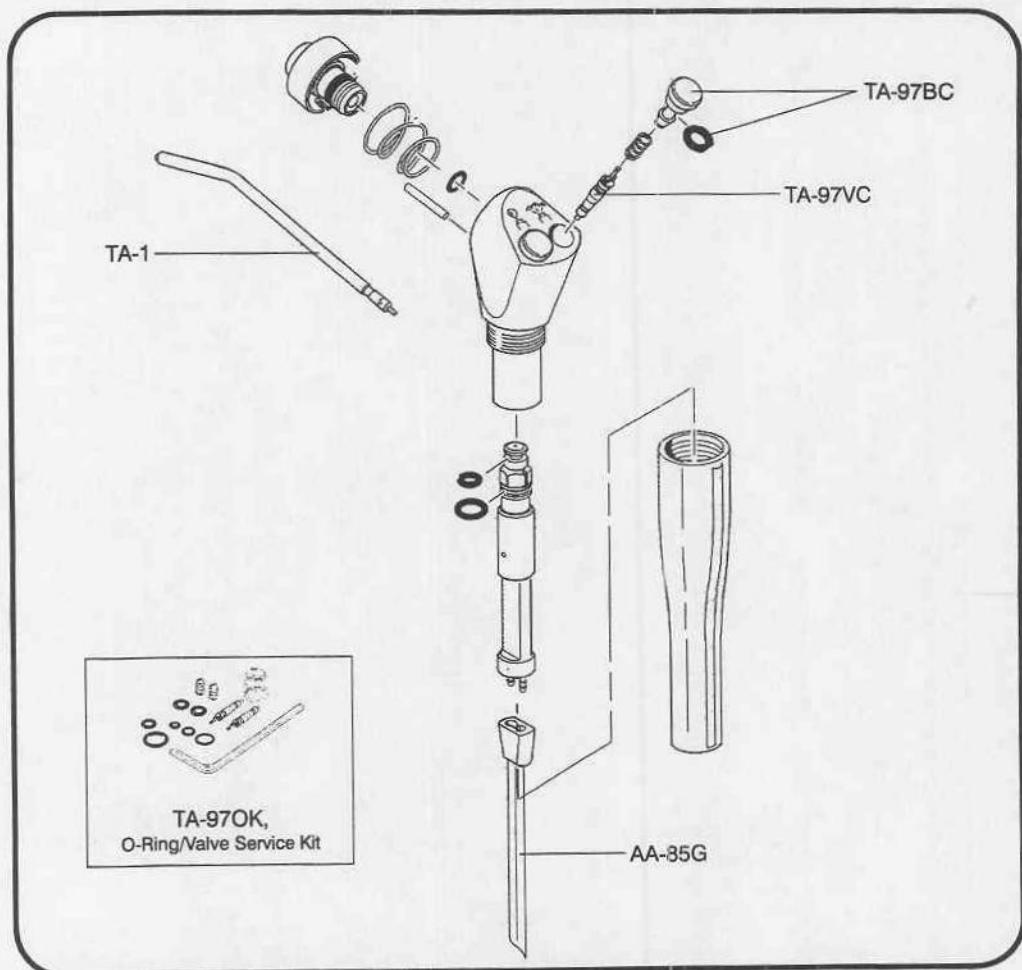


Figure 3  
3-Way Syringe

### **Button and Valve**

Before removing the syringe button, disconnect the syringe from the Q.D. cartridge. Use a non-metallic device such as a tongue depressor or Popsicle stick to gently pry the button valve out of the syringe body. Be careful not to lose the small coil spring that is located beneath the button.

Use the valve core tool (Part No. TA-97VT) to unscrew the valve core from the syringe body. When installing the new valve core, do not over-tighten it. It needs only to be snug enough to seal the bore. Excessive tightening may impair valve operation.

Do not reinstall a used valve core, because it will be difficult to get it to seal properly.

To replace the O-ring on the syringe button, remove the old O-ring carefully, so as to avoid damaging the button itself. Push the replacement O-ring into its groove on the stem of the button.

Drop the coil spring into the syringe body, then carefully push the button into place.

### **Tip Adapter & Collar**

Remove the syringe tip, then use the hex key furnished with the Autoclavable Syringe Valve O-ring Kit to unscrew the tip adapter. Remove the adapter, collar and spring from the syringe body.

Use a dental pick or a bent paper clip to remove the tiny O-ring from the bottom of the bore in the syringe body. Be especially careful not to nick or scratch the sealing surfaces. The easiest way to install the replacement is to slip it onto the end of a syringe tip, lubricate the O-ring, then insert it into the bore. The O-ring around the outside of the adapter is thin and fragile, so the new one has to be installed with care.

Before reinstalling the adapter and collar assembly, look down into the bore in the syringe body and assure that the alignment pin is in place. With the spring in place in the collar, align the slot in the collar with the pin, then push the collar into the syringe body.

Use the hex key to carefully screw in the adapter. Tighten the adapter firmly (35 in-lbs torque). If you don't have a torque measuring device, hold the hex key by the short end, with the long end in the adapter. If you tighten the adapter as tight as you can while holding the tool this way, you will have approximately the right torque.

### **IMPORTANT**

Before performing any service on the Q.D. cartridge, it is necessary to turn off the air and water, and bleed pressure from the system by running a handpiece.

### **Q.D. Cartridge O-Rings**

Removing the syringe from the Q.D. cartridge gives you access to the two O-rings on the end of the adapter. A bent paper clip or a dental pick can be used to remove the O-rings.

Further disassembly of the Q.D. cartridge is needed only if there is reason to believe that foreign material has accumulated inside the upper cartridge body. *There are no serviceable parts inside.*

## TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Insufficient air supply pressure.	Compressor or supply pressure to low. Clogged air filter element. Air filter drain open. Air leak in system. Pinched or crimped supply tubing.	Provide 60-80 PSI air supply. Clean or replace element. Close drain tight. Check fittings, connections for leaks. Uncrimp or replace pinched tube section.
Inadequate drive air to handpieces	Drive air adjustment screw improperly adjusted. Handpiece regulator improperly adjusted. Inadequate air flow from foot control. Handpiece coolant air wide open. Sticky shuttle valve at pressure gauge.	Open drive air adjustment screw. Adjust H.P. regulator to 45 PSI. Inspect, lubricate or rebuild drive air valve. Reduce coolant air flow. Inspect, lubricate, or replace shuttle valve.
Low or no system water pressure.	Leak at water canister lid. Clogged water filter. Water regulator improperly adjusted. Water toggle off.	Inspect, lubricate, or replace lid gasket. Replace water filter. Adjust water regulator to 40-50 PSI output. Connect canister and turn toggle on.
No handpiece water coolant.	Water On/Off toggle not on or malfunction. Water coolant control valve closed or clogged. Anti retraction check valve malfunction. Faulty water air pilot valve. No signal to water air pilot valve.	Turn toggle on, inspect or replace toggle. Open water coolant valve, inspect/replace. Inspect or replace check valve. Apply signal air to open. Replace if stuck. Check drive air signal. Replace shuttle valve.
No handpiece flush water.	No system air/water pressure. Faulty flush toggle valve. Faulty shuttle valve.	Refer to air and water supply pressure symptoms. Activate toggle & check for air output. Replace. Inspect, lubricate, or replace shuttle valve.
Inadequate or no vacuum.	Vacuum auto holder closed. Vacuum regulators improperly adjusted. Clogged HVE solids collector screen. Vacuum waste bottle lid leak. Inadequate vacuum air pilot signal. Faulty vacuum air pilot valve.	Remove valve from holder. Turn on lock-out toggle. Set saliva ejector at 16PSI. Set HVE reg. at 43PSI. Clean or replace solids collector screen. Tighten waste bottle lid firmly. Check signal tube for pinch and pressure. Inspect, lubricate, or replace.
Air/Water Syringe malfunction.	Refer to Syringe Dis-Assembly section.	

**ADU-10CF**  
**SCHEMATIC DIAGRAMS**  
**&**  
**PARTS LIST**

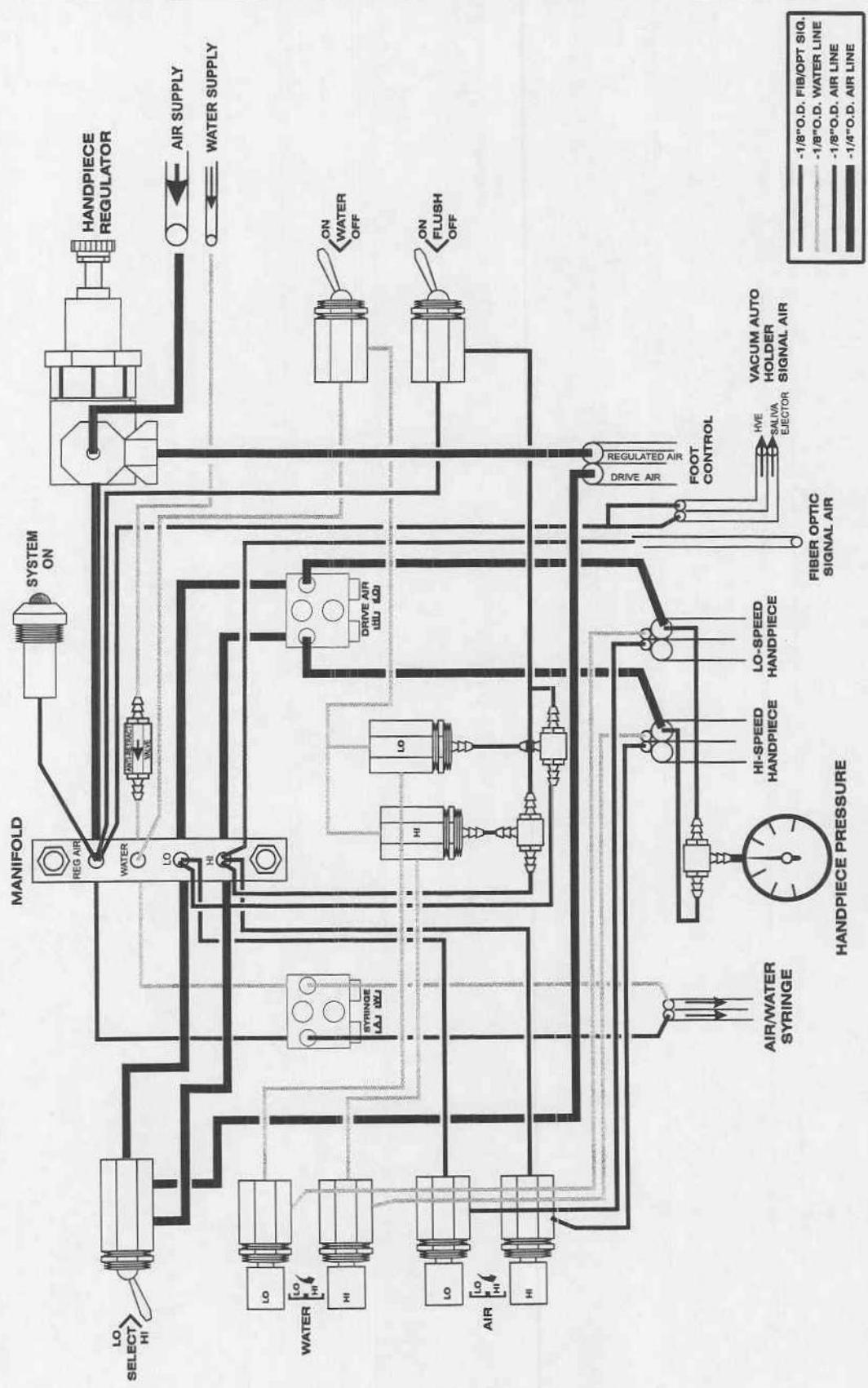


Figure 1A - SYSTEM SCHEMATIC, ADU-10CF HANDPIECE CONTROL

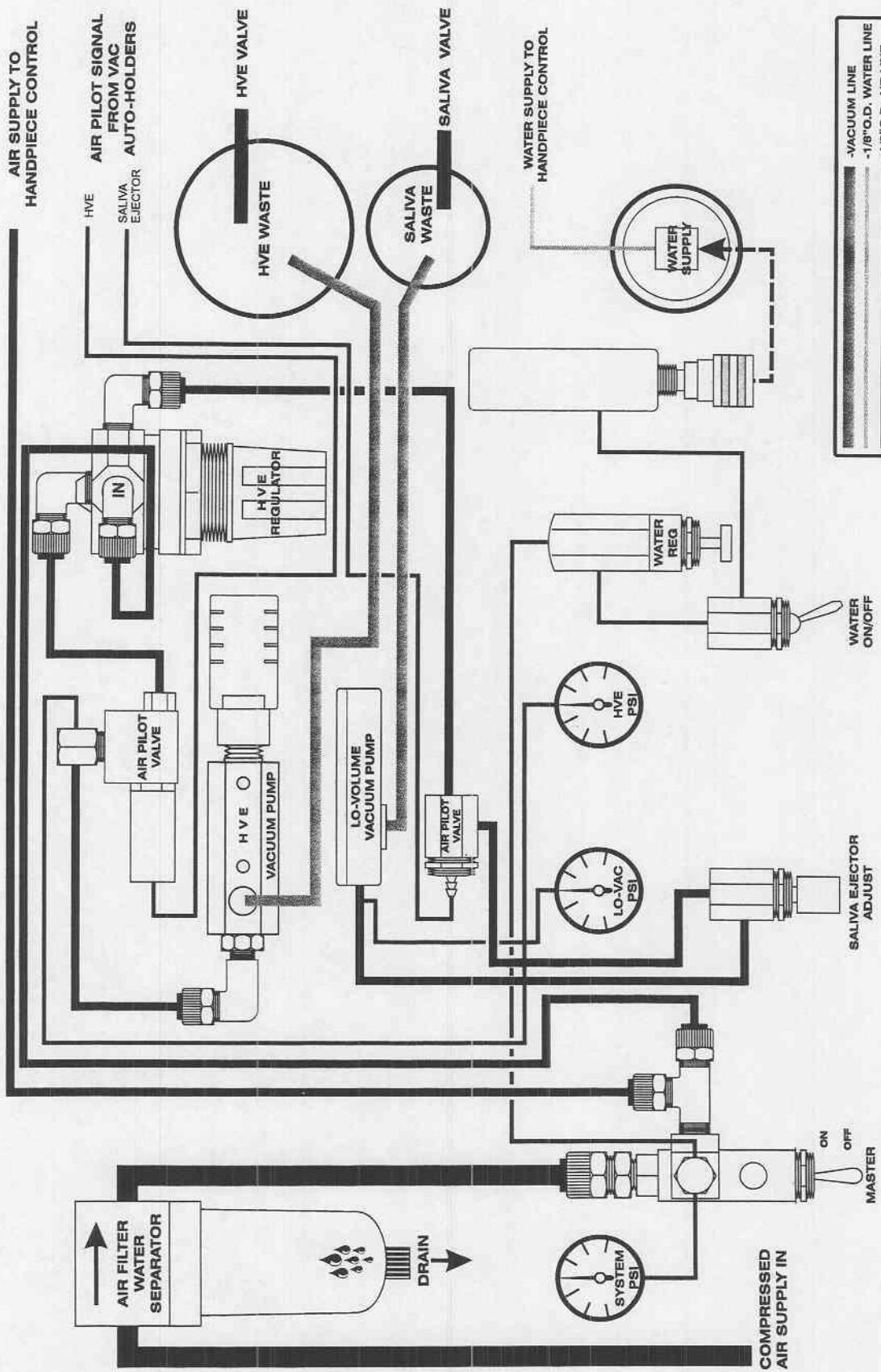


Figure 2A - SYSTEM SCHEMATIC, ADU-10CF VACUUM CONTROL

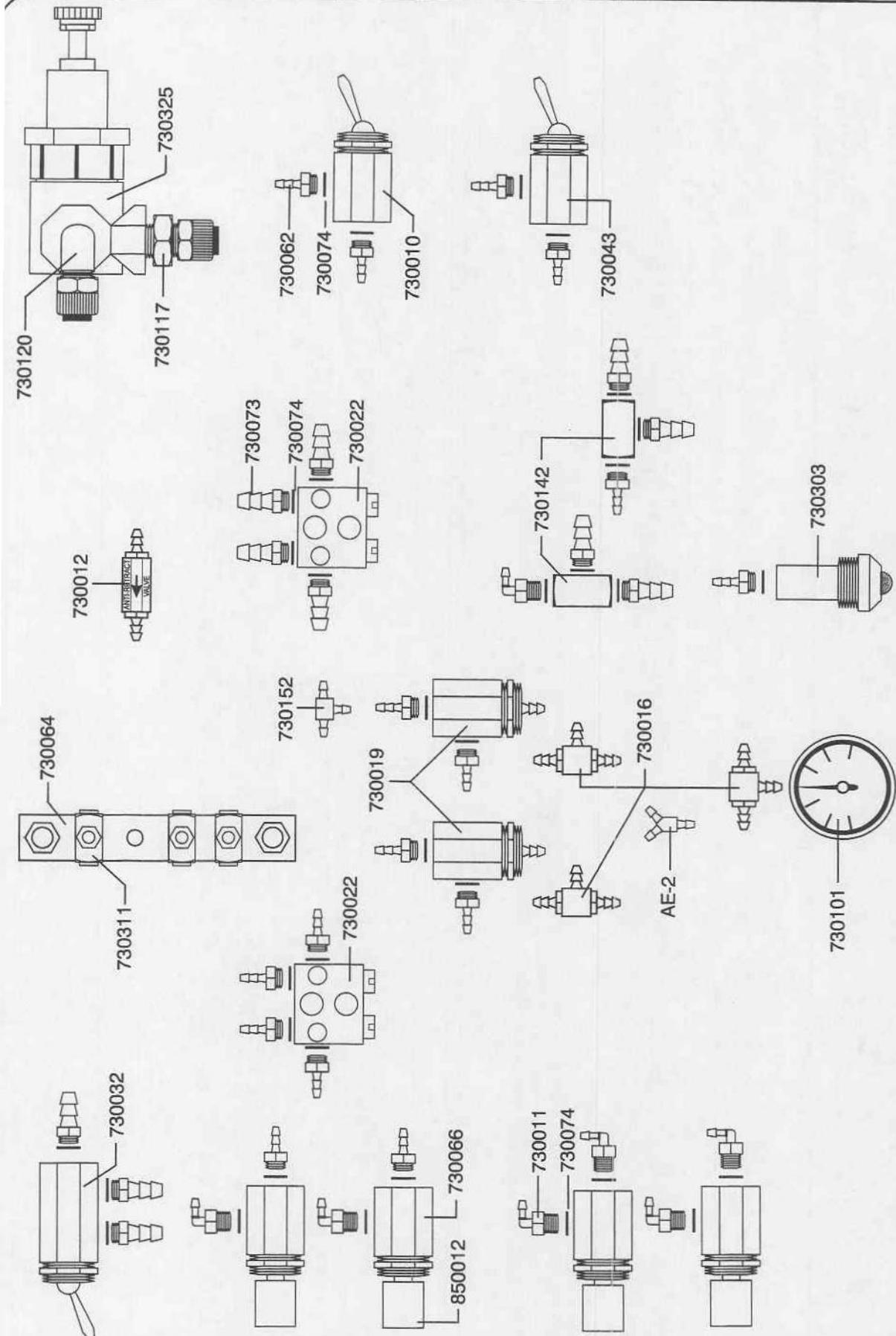


Figure 3A - ILLUSTRATED PARTS LIST, HANDPIECE CONTROL

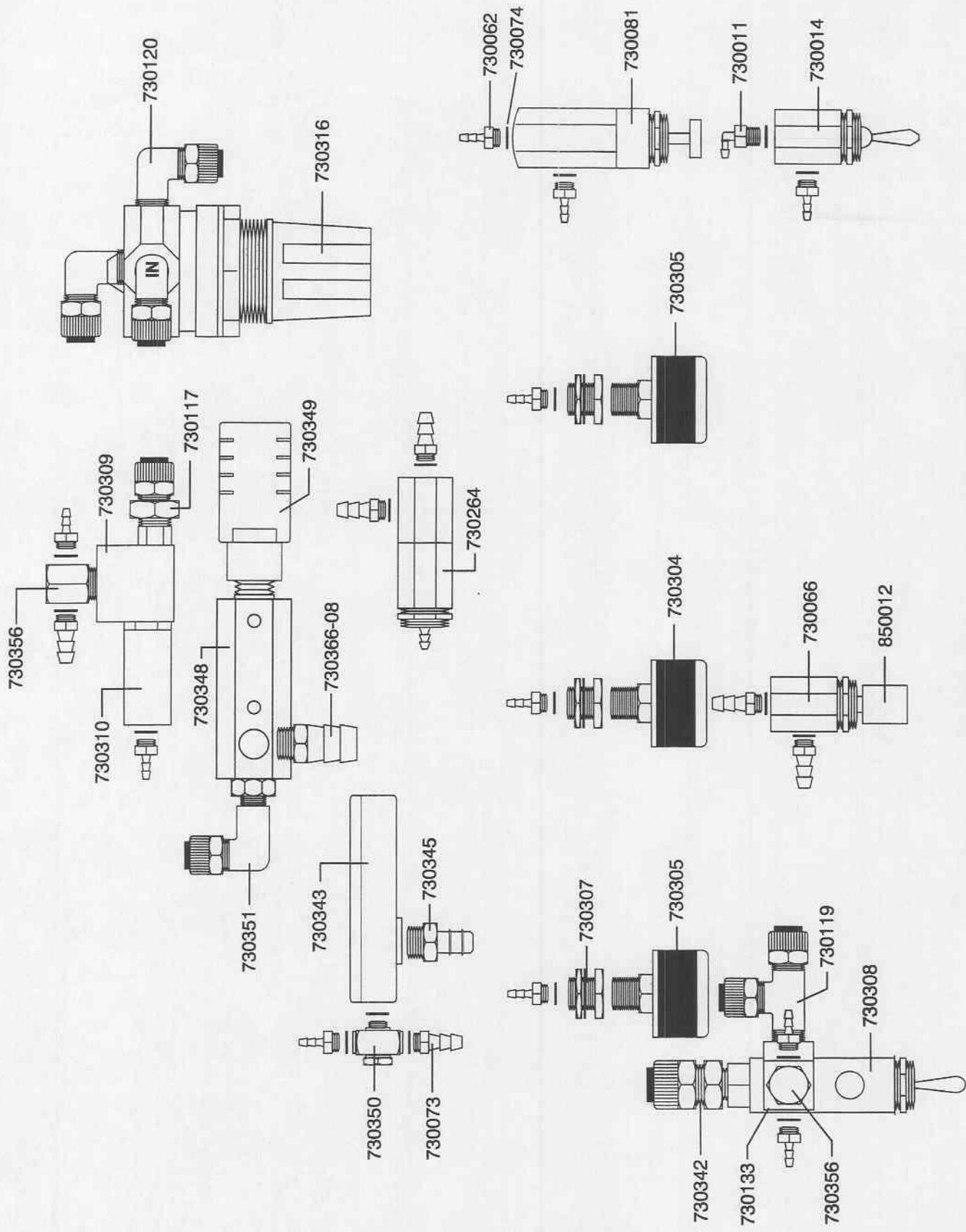


Figure 4A - ILLUSTRATED PARTS LIST, VACUUM CONTROL

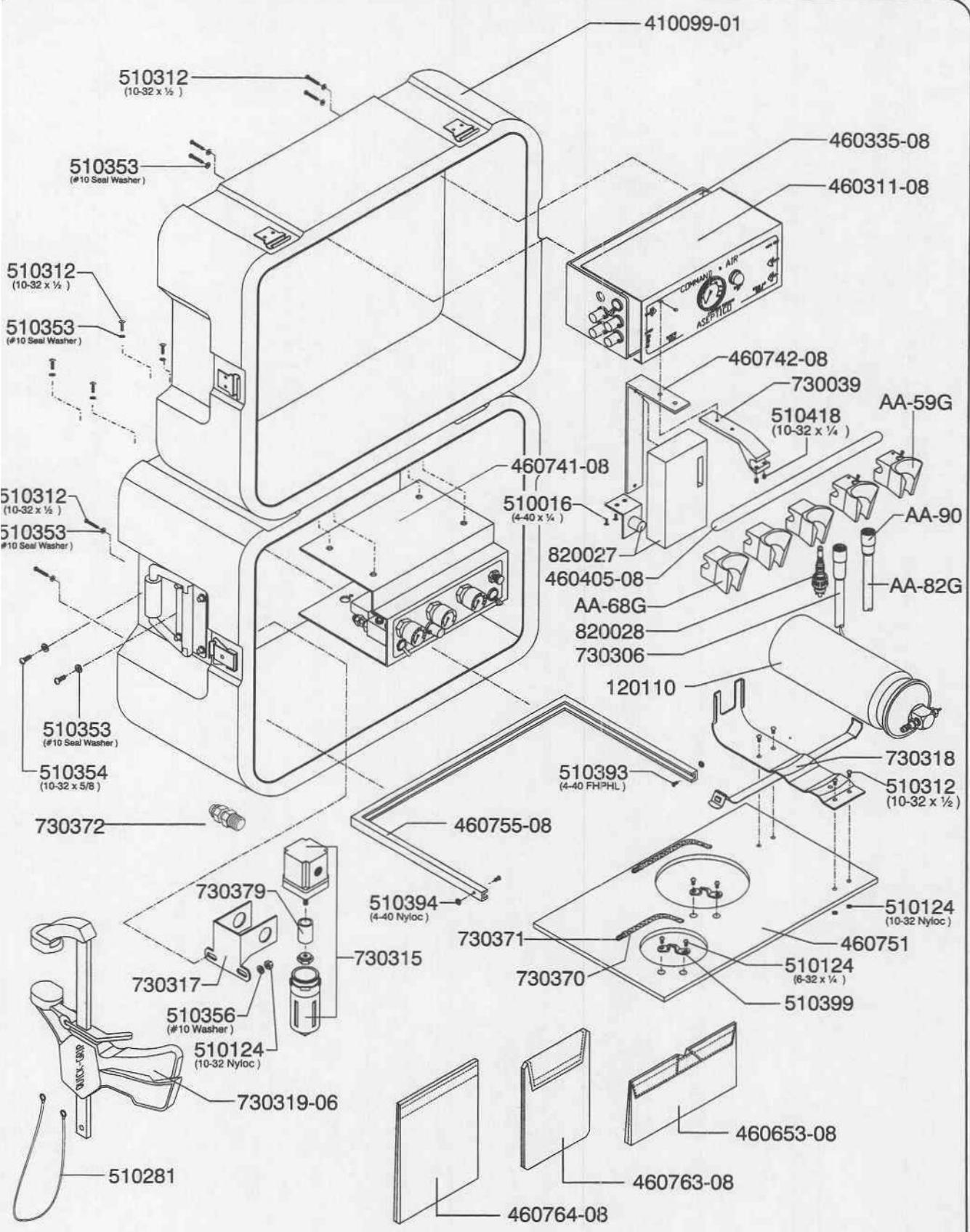


Figure 5A - ILLUSTRATED PARTS LIST, ADU-10CF CASE COMPONENTS

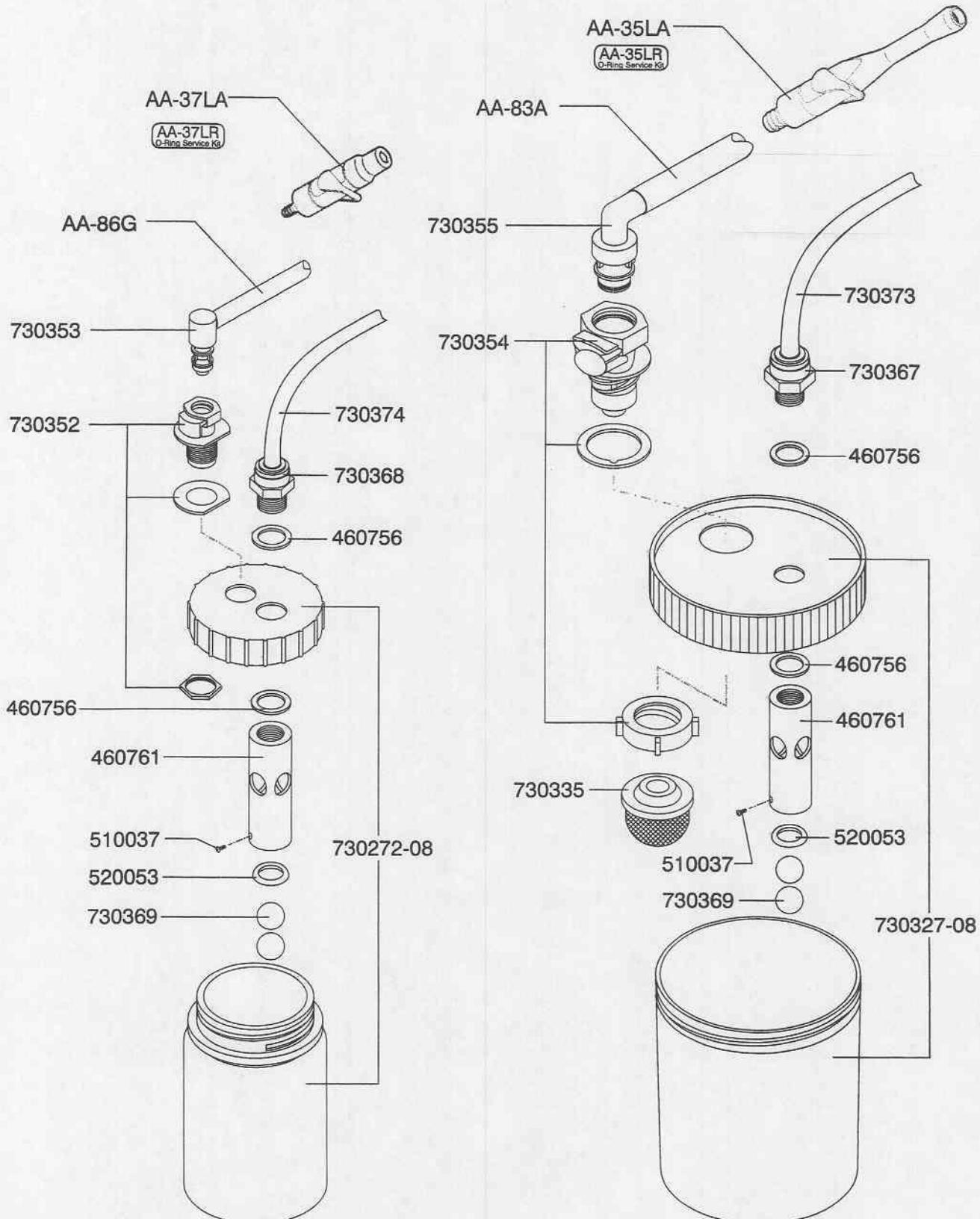


Figure 6A - ILLUSTRATED PARTS LIST, HVE & SALIVA EJECTOR ASSEMBLY

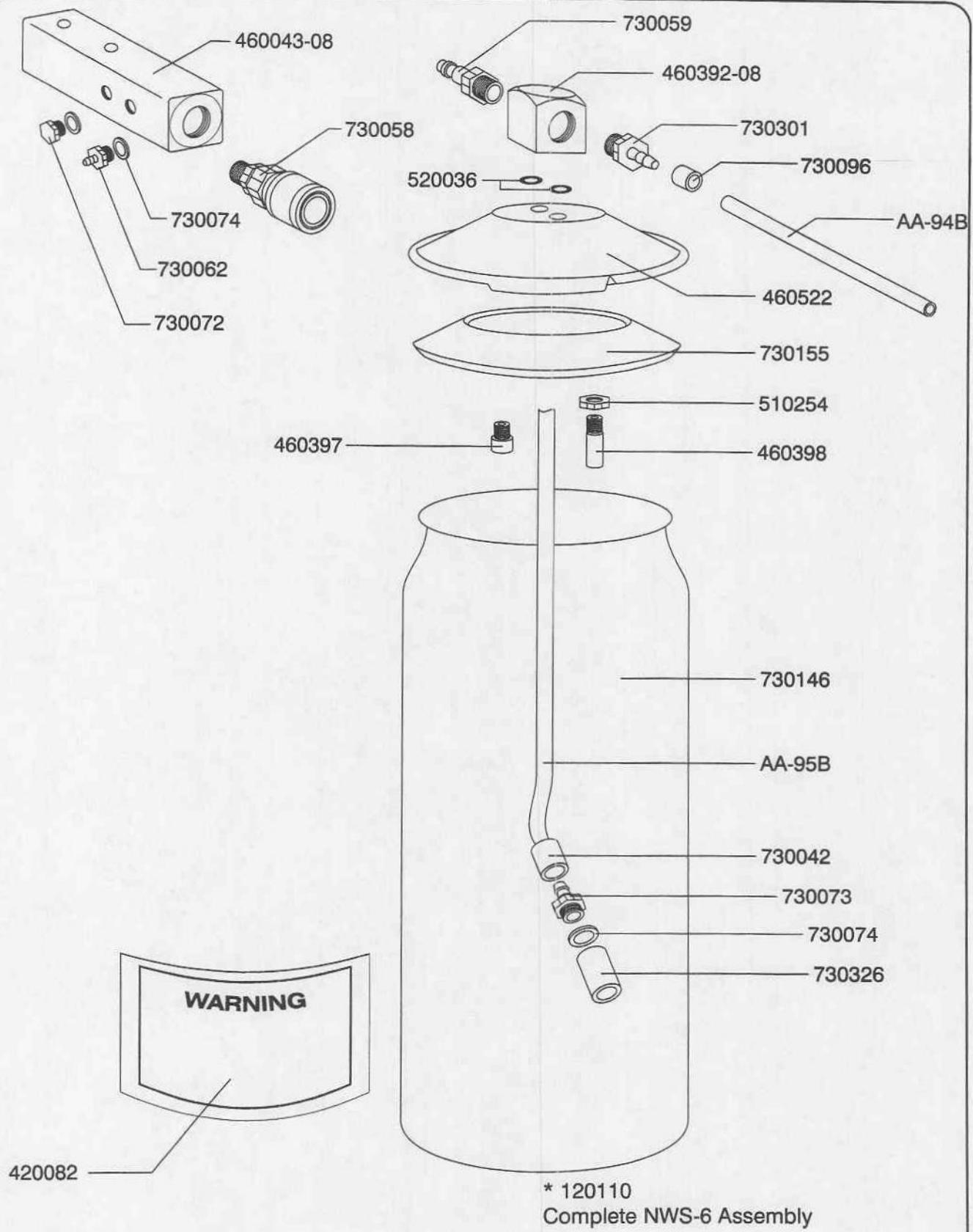
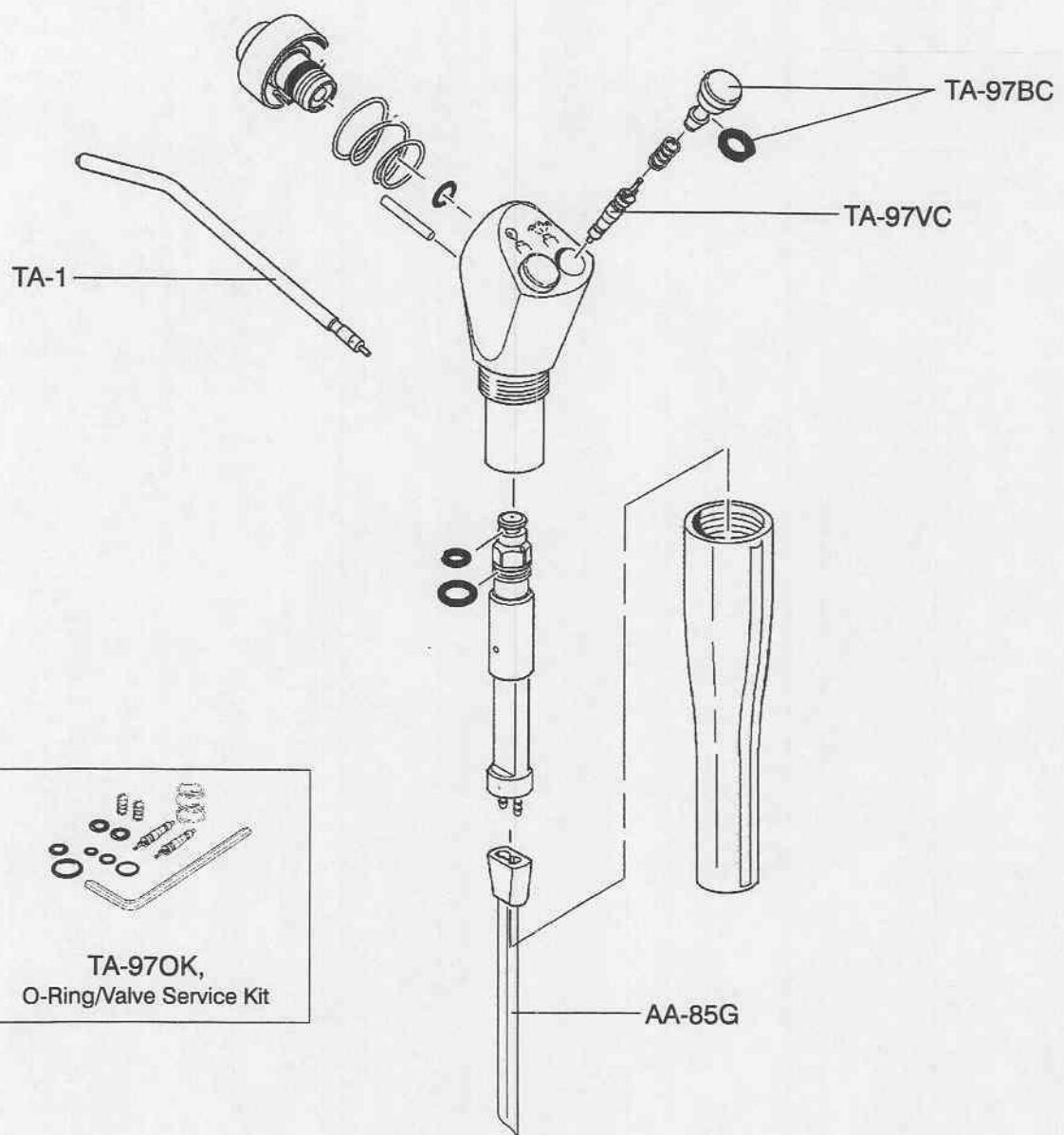
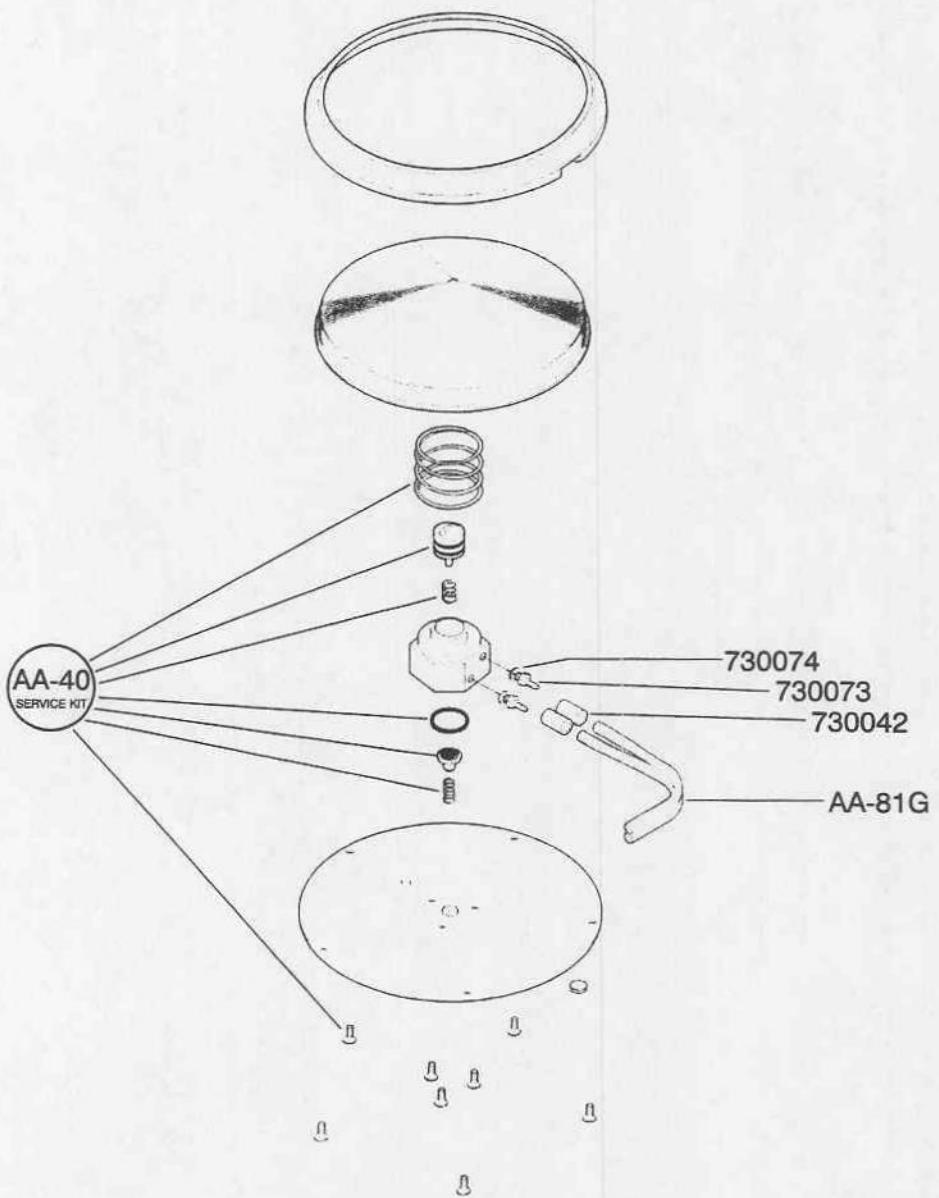


Figure 7A - ILLUSTRATED PARTS LIST, NWS-6 WATER SYSTEM



\* TA-97, Autoclavable 3-Way Syringe Complete

Figure 8A - ILLUSTRATED PARTS LIST, TA-97 AUTOCLAVABLE 3-WAY SYRINGE



\* AA-42, Standard Disc Foot Control Complete

Figure 9A - ILLUSTRATED PARTS LIST, AA-42 STANDARD DISC FOOT CONTROL

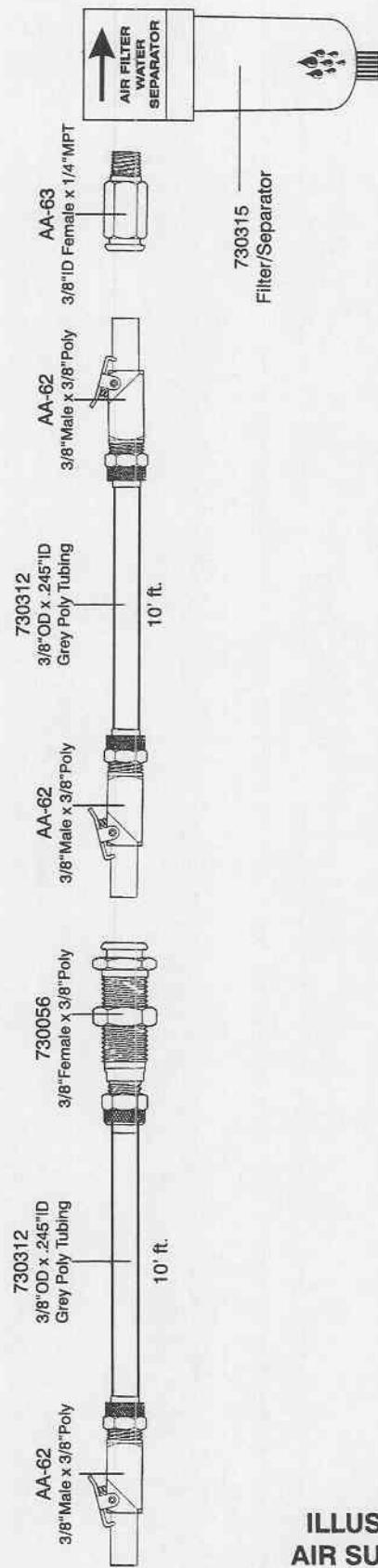


Figure 10A  
ILLUSTRATED PARTS LIST,  
AIR SUPPLY LINE ASSEMBLY

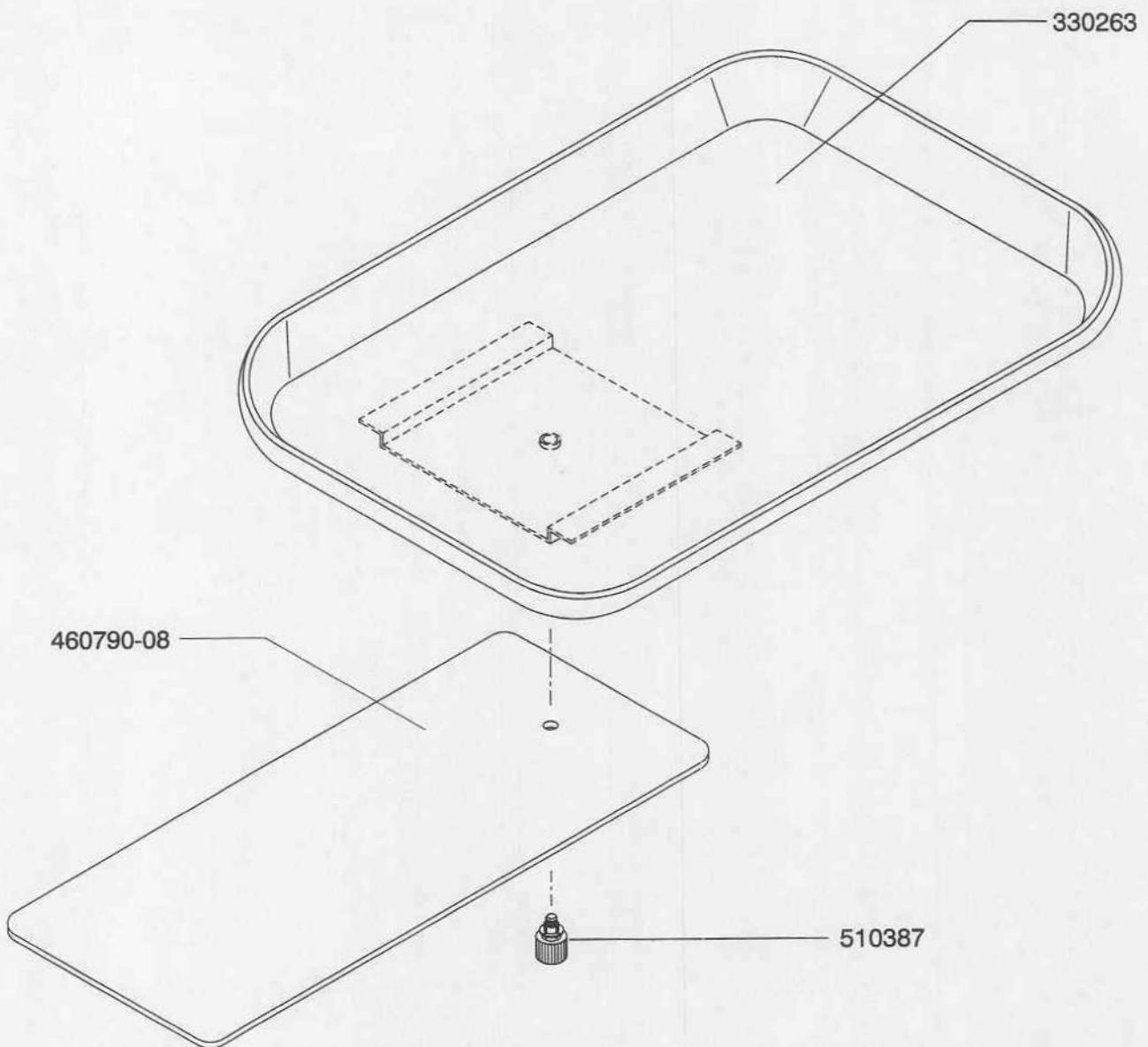


Figure 11A - ILLUSTRATED PARTS LIST, 330256 SWIVEL TRAY ASSEMBLY

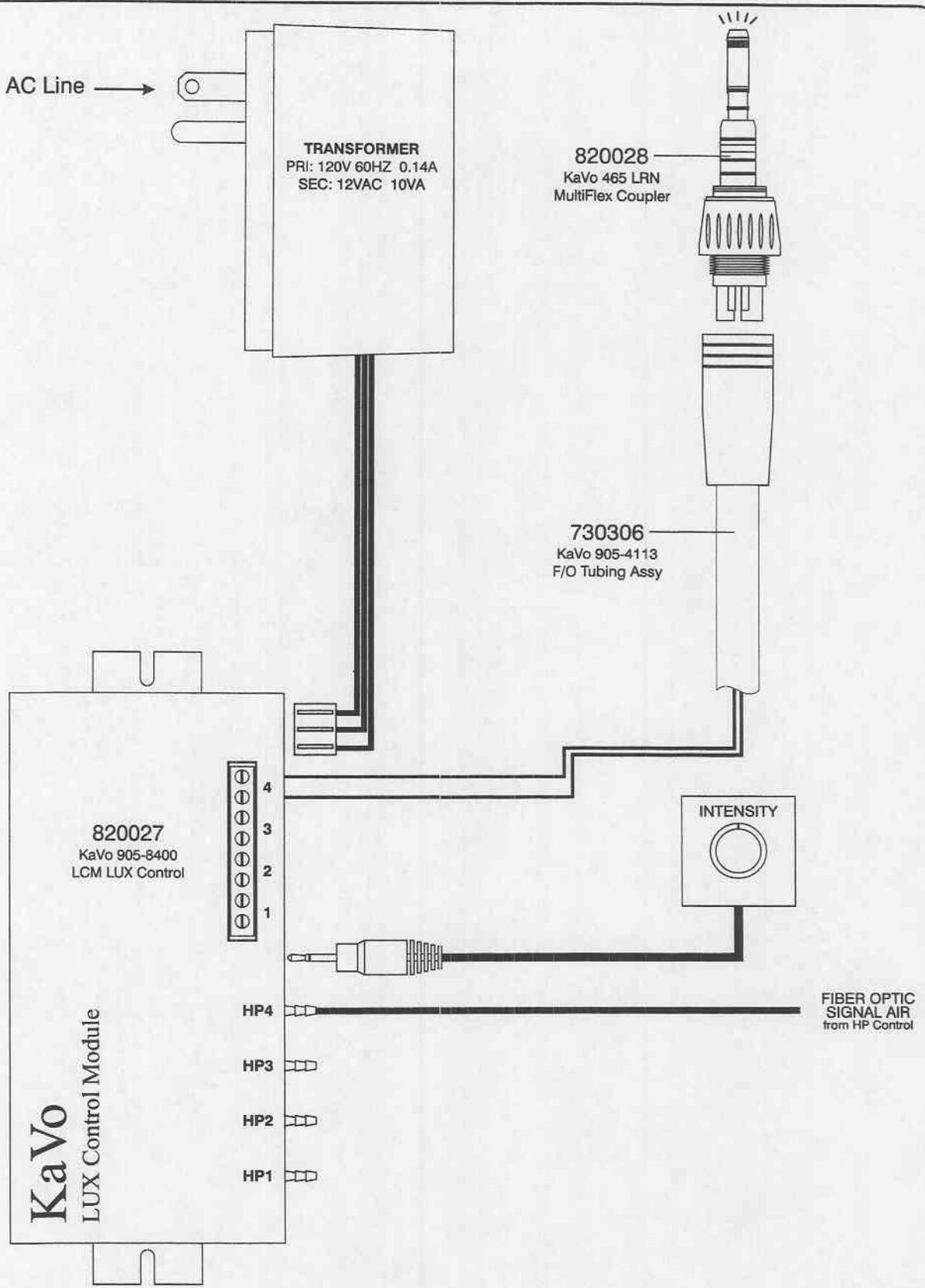


Figure 12A - ILLUSTRATED PARTS LIST& SCHEMATIC, KAVO FIBER OPTIC SYSTEM

**PARTS LIST** (Listed in reverse numerical order)

PART NUMBER	DESCRIPTION	QTY	Figure No.
TA-97	SYRINGE 3-WAY DCI AUTOCLAVABLE	1	8A
TA-97BC	SYRINGE BUTTON CARTRIDGE	--	8A
TA-970K	SYRINGE O-RING. VALVE SERVICE KIT	--	8A
TA-97VC	SYRINGE VALVE CORE	--	8A
TA-97VT	SYRINGE VALVE CORE TOOL	--	NOT SHOWN
TA-1	SYRINGE TIP, AUTOCLAVABLE	--	8A
AA-95C	TUBING POLY 1/4OD CLR	PER FT.	1A
AA-95G	TUBING 1/4 OD GREY	3 FT.	1A, 2A
AA-95B	TUBING POLY 1/4OD BLU	PER FT	1A
AA-94C	TUBING POLY 1/8OD CLR	PER FT	1A, 2A
AA-94B	TUBING POLY 1/8OD BLU	PER FT	1A, 2A
AA-90	HPCE CONNECTOR MIDWEST AUTONUT	1	5A
AA-86G	TUBING SALIVA EJECT 3/8OD GREY	PER FT	6A
AA-85G	TUBING 2H POLY STRT SYNG GREY	PER FT	8A
AA-83A	TUBING ASEPSI-FLEX 1/2ID GREY	PER FT	6A
AA-82G	TUBING 4H POLY STRT HPCE GREY	PER FT	5A
AA-81G	TUBING, FOOT CONTROL	PER FT	9A
AA-68G	HOLDER 1/2D UNIVERSAL GREY	3	5A
AA-63	FTN QD 3/8FEM X 1/4MPT W/SO	1	10A
AA-62	FTN QD 3/8MALE X 3/8POLY W/SO	3	10A
AA-59G	HOLDER AUTO W/LOCKOUT HPCE GREY	2	5A
AA-42	CONTROL FOOT STD DISC GREY	1	9A
AA-40	FOOT CONTROL DRIVE AIR SERVICE KIT	1	9A
AA-37LR	O-RING SERVICE KIT	1	6A
AA-37LA	VALVE SAL/EJECT AUTOCLAV LEVER	1	6A
AA-35LR	O-RING SERVICE KIT	1	6A
AA-35LA	VALVE CENT VAC UNIV LEVER AUTO	1	6A
AE-2	FTN, 1/16" DELRIN 'Y'	1	3A
730387	SLEEVE TOOL, UNIVERSAL	0	NOT SHOWN
730366-08	FTN 1/8 MPT X 3/8 BARB MODIFID	1	4A
730327-08	BOTTLE 1000mL MODIFIED	1	6A
730319-06	CLAMP 6" MINI PISTOL GRIP MOD	1	5A
730272-08	BOTTLE POLY 1 PINT MODIFIED	1	6A
850012	KNOB GRY PLASTIC 1/4D STYLE II	5	3A
820028	FIB/OPT KAVO 465LRN MULTIFLEX	1	5A, 12A
820027	FIB/OPT KAVO LCM LUX CONTROL	1	12A
730379	FILTER, REPLACEMENT ELEMENT	1	5A

PART NUMBER	DESCRIPTION	QTY	Figure No.
730374	TUBING 3/8OD X .062W GRY URETH	PER FT	6A
730373	TUBING 1/2OD X .062W GRY URETH	PER FT	6A
730372	FTN 3/8 POLY X 1/4 MPT	1	5A
730371	HOOK 1/4" BLACK PLASTIC	PER FT	5A
730370	CORD BUNGEE 1/4" DIA.	PER FT	5A
730369	BALL 3/4"D HOLLOW POLYPRO GRND	4	6A
730368	FTN PUSH-IN 3/8 TUBE X 3/8NPT	1	6A
730367	FTN PUSH-IN 1/2 TUBE X 3/8NPT	1	6A
730356	FTN 1/8MPT X 10-32 TEE BRASS	2	4A
730355	FTN QD CPC ELBOW MALE 1/2"BARB	1	6A
730354	FTN QD CPC PANEL MNT FEM 1/2"	1	6A
730353	FTN QD CPC ELBOW MALE 1/4"BARB	1	6A
730352	FTN QD CPC PANEL MNT FEM 1/4"	1	6A
730351	FTN 1/8FPT 1/4POLY 90 DEG. ELB	1	4A
730350	FTN ADJUSTABLE POSITION 10-32T	1	4A
730349	MUFFLER HIGH FLOW 1/4" FPT METL	1	4A
730348	PUMP VACUUM AIR-VAC SINGLE	1	4A
730345	FTN MALE CONN 3/8ODX1/4IDX1/8M	1	4A
730343	PUMP VACUUM PIAB M5	1	4A
730342	FTN 3/8 POLY X 1/8 MPT	1	4A
730335	STRAINER 1/4NPT 20 STAINLESS	1	6A
730326	FILTER 10-32 THREAD STAINLESS	1	7A
730325	REGULATOR 0-90PSI 1/8NPT SUBMI	1	3A
730318	BRKT KIDDE METAL STRAP	1	5A
730317	BRKT MODULAR MNTG FOR WILKERSN	1	5A
730316	REGULATOR 1/8"NPT 17CFM 0-300PSI	1	4A
730315	FILTER 1/4"NPT 25CFM 5MICRON	1	10A
730312	TUBING 3/8OD X .245ID GREY POLY	PER FT	10A
730311	FTN ADJSTBLE POSITN 10-32CROSS	3	3A
730310	VALVE AIR PILOT ACTUATOR	1	4A
730309	VALVE 2-WAY SPOOL NORMALLY OPEN	1	4A
730308	VALVE ON/OFF 1/8NPT TOGGLE	1	4A
730307	FTN 1/8" FPT X 10-32 BULKHEAD	3	4A
730306	TUBING F/O KAVO LCM 11' STR GREY	1	12A
730305	GAUGE 0-100PSI 1/8MPT 1" FACE	2	4A
730304	GAUGE 0-60PSI 1/8MPT 1" FACE	1	4A
730303	VALVE PNEUMATIC INDICATOR	1	3A

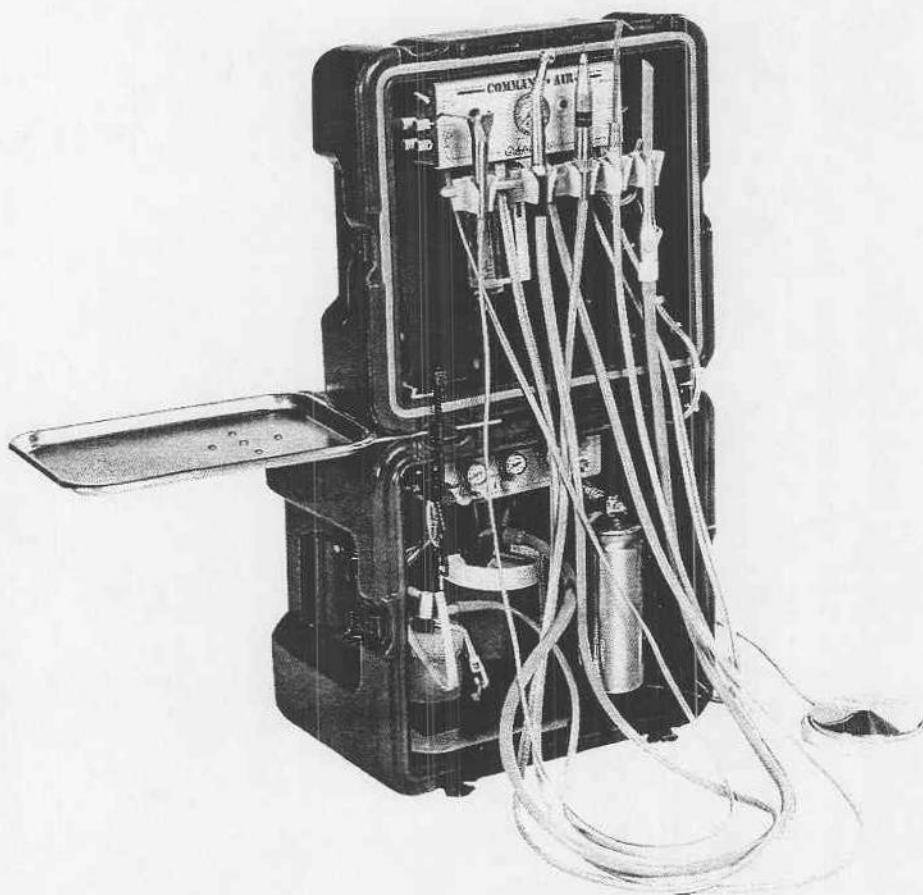
PART NUMBER	DESCRIPTION	QTY	Figure No.
730301	FTN 1/8 MPT X 1/16 BARB	1	7A
730264	VALVE AIR PILOT 2WAY W/O EX NO	1	4A
730245	BRKT 90DEG X 31/64"DIA MNTNG	4	NOT SHOWN
730155	GASKET RUBBER NWS-6	1	7A
730152	FTN, 1/16" DELRIN TEE	1	3A
730146	CANISTER 28OZ STNLS	1	7A
730142	FTN 10-32 FEMALE TEE NKL PLTD	2	3A
730133	FTN STREET/TEE 1/8MPT	1	7A
730120	FTN ELBOW 90 1/4POLYX1/8MPT	5	3A, 4A
730119	FTN MALE RUN TEE 1/4X1/8NPT	1	4A
730117	FTN 1/4 POLY X 1/8MPT POLYTITE	3	3A, 4A
730101	GAUGE 0-100PSI 1-5/8 PANEL MTG	1	3A
730096	FTN 1/8 DELRIN UNI-CLAMP	14	NOT SHOWN
730095	FTN 1/4 DELRIN SLEEVE	18	NOT SHOWN
730081	VALVE REG NONRELIEVING 10 X 32	1	4A
730074	GASKET NYLON #10	88	3A, 4A
730073	FTN BARB 10-32 X 1/8 BRT/NKL	20	3A, 4A
730072	FTN PLUG 10-32 HEX BRT/NKL	2	7A
730066	VALVE NEEDLE CONTROL W/O KNOB	5	3A
730064	BLOCK MINI 4 PORT TERMINAL	1	3A
730062	FTN BARB 10-32 X 1/16 PLATED	42	3A, 4A
730059	FTN QD CPLR 1/8M PLUG X 1/8MPT	1	7A
730058	FTN QD CPLR 1/8SOCKET X 1/8MPT	1	7A
730056	FTN QD 3/8FEM X 3/8POLY W/SO	1	10A
730043	VALVE TOGGLE MMTRY 3W-W/EXHST	1	3A
730039	HOLDER BAR MOUNT	1	5A
730032	VALVE TOGGLE 3-WAY 3-PORT	1	3A
730022	BLOCK FLOW ADJUSTMENT	2	3A
730019	VALVE AIR PILOT 2WAY W/O EX NC	2	3A
730016	VALVE SHUTTLE BARB 10-32X1/16	3	3A
730015	1/8" SLEEVE CLAMP, CLEAR	55	NOT SHOWN
730014	VALVE TOGGLE 3W/2P GRY W/EX	1	4A
730012	VALVE CHECK ANTI RETRACTION	1	3A
730011	FTN ELBOW 90 10-32 X 1/16BARB	2	3A, 4A
730010	VALVE TOGGLE 2W/2P GRY W/O EX	1	3A
520053	O-RING 5/8ID X 13/16OD X 3/32W	2	6A
* 510417	RIVET 3/16DIA. X .250 GRIP AL	2	NOT SHOWN

\* Commercially Available Parts

PART NUMBER	DESCRIPTION	QTY	Figure No.
* 510399	CLEAT STNLS STEEL ROPE GUIDE	2	5A
* 510394	NUT NYLOC 4-40 STNLS HEX	2	5A
* 510393	M/S STNLS FLAPHL 4-40X1/2	2	5A
* 510387	THUMBSCREW 10-32SS RETRACTABLE	1	11A
* 510380	SMS STNLS PHDPHL #6 X 3/4L	2	NOT SHOWN
* 510354	C/S BTNSOC STNLS 10-32 X 5/8	3	5A
* 510353	WASHER SEALING STNLS ST #10	12	5A
* 510312	C/S BTNSOC STNLS 10-32X1/2	15	5A
* 510309	C/S BTNSOC STNLS 8-32X1/4	2	NOT SHOWN
* 510281	LANYARD 12" LENGTH 3/8" TAB	2	5A
* 510255	C/S BTNSOC STNLS 10-32X1-1/4	2	NOT SHOWN
* 510254	NUT HEX 10-32 STNLS	1	7A
* 510160	C/S BTNSOC STNLS 6-32X3/8	2	6A
* 510137	TIE WRAP 4" PICO WHT,	32	NOT SHOWN
* 510124	NUT NYLOC 10-32 STNLS	8	5A
* 510037	C/S BTNSOC STNLS 6-32X1/4	8	6A
* 510016	C/S BTNSOC STNLS 4-40X1/4	2	5A
* 510006	NUT KEPS PLTD 6-32, TABLE	10	NOT SHOWN
460790-08	SWIVEL ADU-10CF ARM TRAY CMPL	1	11A
460764-08	POUCH STORAGE ADU-10CF 12 X 16	1	5A
460763-08	POUCH STORAGE ADU-10CF	1	5A
460761	FLOAT BODY	2	6A
460756	GASKET 7/8 X 5/8 X 1/16 NEOPRE	4	6A
460755-08	BRKT ADU-10CF VACUUM TRAY CMPL	1	5A
460751	TRAY/HOLDER ADU-10CF VACUUM BT	1	5A
460742-08	BRKT KAVO ADU-10CF CMPL	1	5A
460741-08	CHASSIS ADU-10CF VACUUM CMPL	1	5A
460653-08	POUCH STORAGE ADU-10CF 16X8.5	1	5A
460522	CANISTER COVER STNLS 28OZ MOD	1	7A
460405-08	HOLDER BAR 1/2" ADU-10F CMPL	1	5A
460398	NIPPLE NWS-6 STNLS 10-32X1"	1	7A
460397	MOD FTN M/S STNLS 10-32X1/4	1	7A
460392-08	MANIFOLD CUBE 4PORT CMPL	1	7A
460335-08	CHASSIS ADU-10CF BACK CMPL GREY	1	5A
460311-08	CHASSIS ADU-10CF FRONT CMPL GREY	1	5A
460043-08	MANIFOLD 3PORT SIDE MTG CMPL	1	7A
450102	BOX SHIP 17-5/8X16-3/8X17-1/4	1	NOT SHOWN

\* Commercially Available Parts

PART NUMBER	DESCRIPTION	QTY	Figure No.
420228	ID PLATE ADU-10CF MIL SPEC CSE	1	NOT SHOWN
420218	MANUAL ADU-10CF MAINTENANCE	1	NOT SHOWN
420217	MANUAL ADU-10CF OPERATION	1	NOT SHOWN
420216	MANUAL ADU-10CF LAMIN SCHEMATIC	1	NOT SHOWN
420082	LABEL PRES SENS WARNING SLV FO	2	7A
410099-01	CASE MIL-SPEC ADU-10CF(X)	1	5A
330256	TRAY ADU-10CF ASSY	1	11A
120110	FINAL ASSY NWS-6 WATER SYSTEM	1	7A



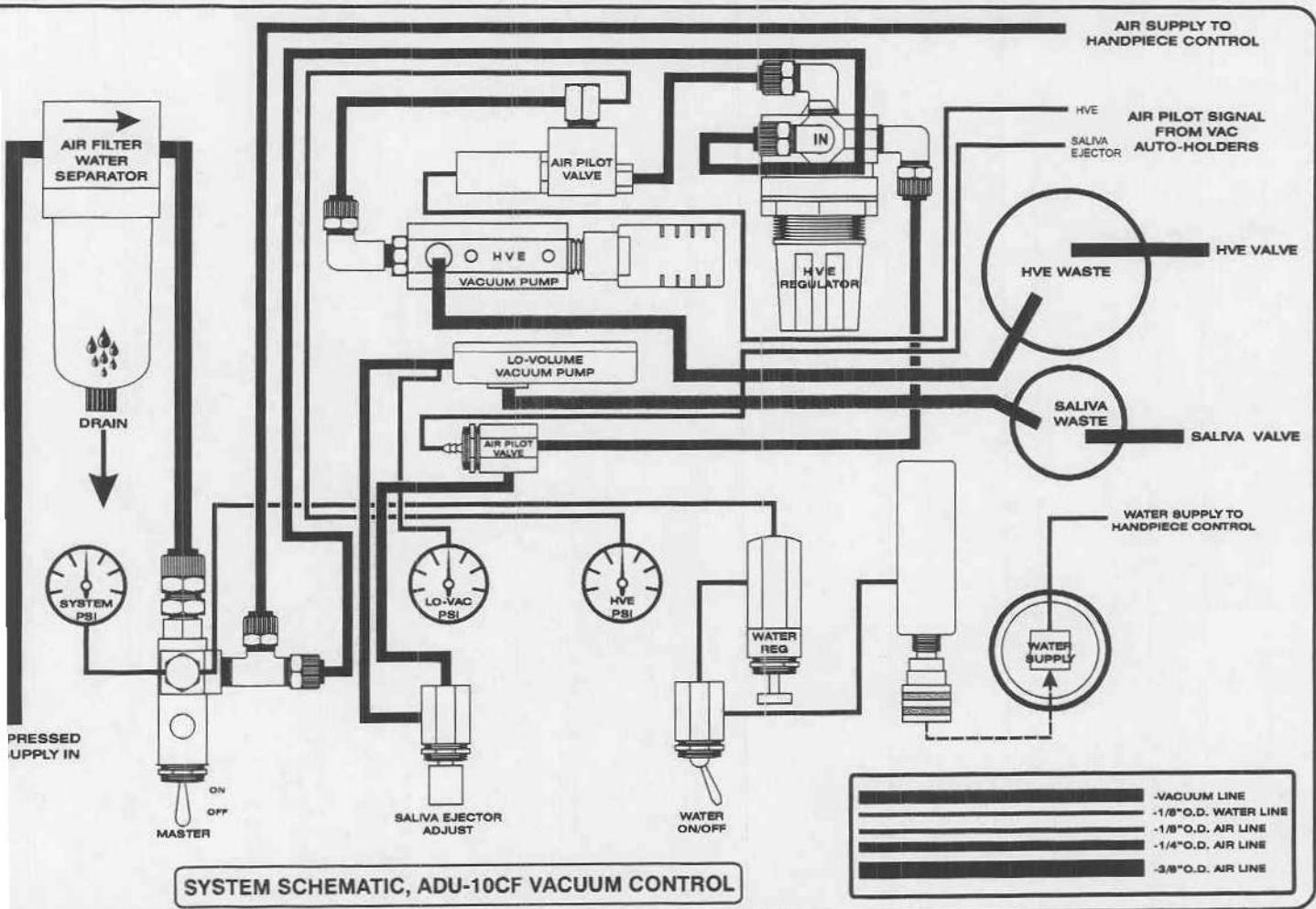
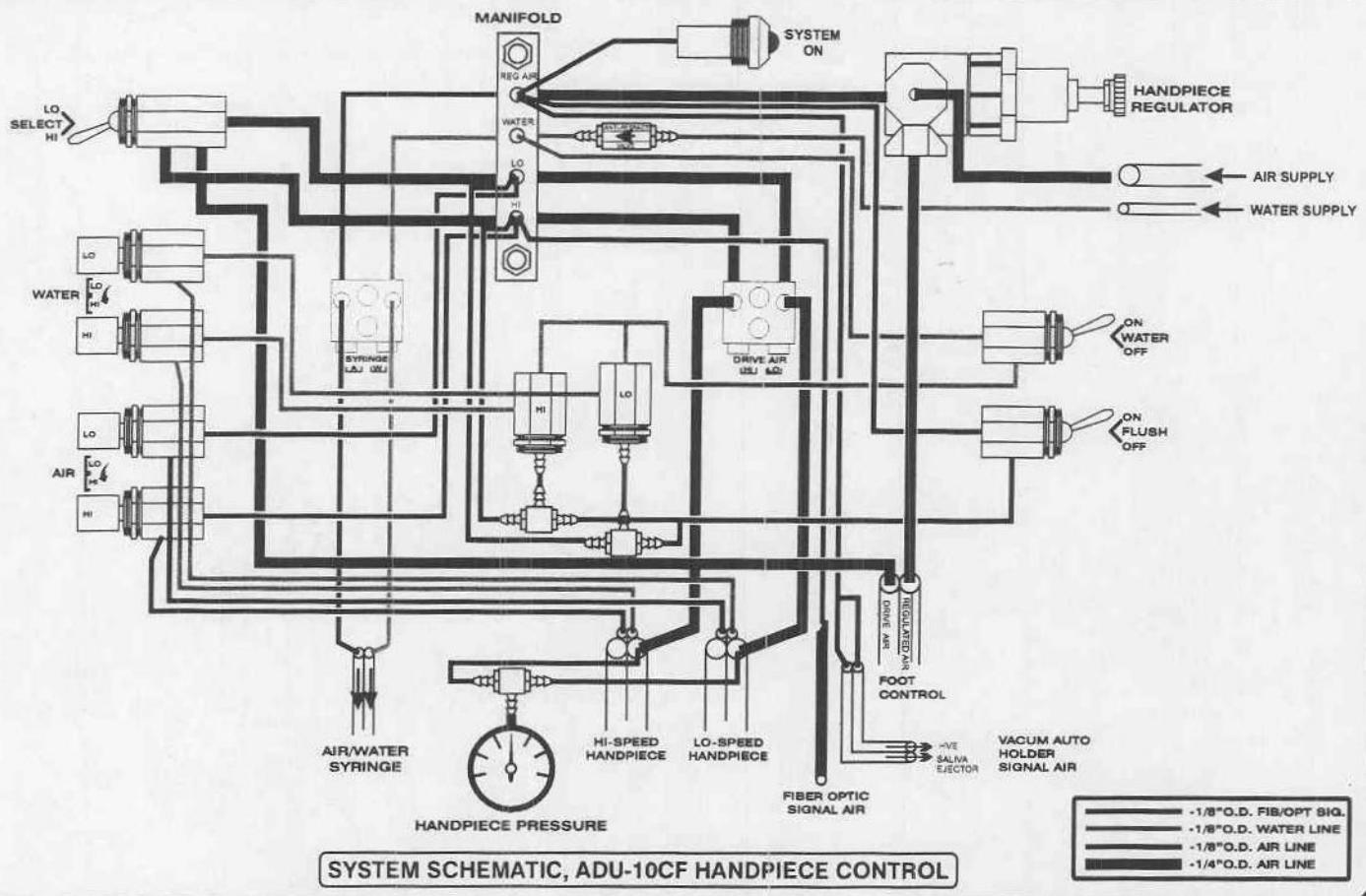
## **ADU-10CF SPECIFICATIONS**

Standard Features:	One Autoclavable Three-Way Syringe Two Manual ISO 4-hole Handpiece Controls One Low Volume Evacuator One High Volume Evacuator Variable Speed Disc Foot Control Self Contained Water System One Fiber Optic Handpiece Lighting System Stainless Steel Instrument Tray (13.5"x9.75")
Weight:	39 Lbs.
Dimensions:	17.5" w x 16" d x 17" h
Volume:	2.76 cubic ft.
Electrical:	120v 50/60Hz. (Fiber Optic System)
Fiber Optic Bulb:	3.3 VDC Max. 2.5 watt 40,000 LUX
Reservoir Capacities:	Water System- 828ml. (28oz.) HVE Waste- 800ml. (27.0 fl. oz.) Saliva Ejector Waste- 475ml. (16.1 fl. oz.)
Vacuum Performance:	High Volume- 2.0 SCFM @ 4.0 Hg. Simultaneous Operation 2.3 SCFM @ 5.1 Hg. Max. Low Volume 0.1 SCFM @ 3.0 Hg. Simultaneous Operation 0.4 SCFM @ 2.4 Hg. Max.
Handpiece Performance:	0-32 PSI Simultaneous Operation 0-50 PSI Max.
Operating Temperature:	2° C to 49° C (35° F to 120° F)

*For Further Service And/Or Technical Assistance Contact:*



*P.O. Box 1548 Woodinville, WA 98072-1548  
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**ADU-10CF Command Air Dental Unit**  
**SET-UP AND PRESSURE SETTING**  
**INSTRUCTIONS**

**Set-Up**

pack the ADU-10CF Unit from all external packaging. With the large side of the unit down, unlock all perimeter latches and open the lid. The large side of the case contains the vacuum and water systems and acts as the base of the unit. The small side of the unit contains the delivery head controls and should hinge upward. Remove the instrument tray and swivel bracket assembly from the case. Attach swivel bracket onto the bottom of the instrument tray, rotate to the extended position and secure with the thumbnut. Pinch tray and bracket assembly between lid and base for mounting.

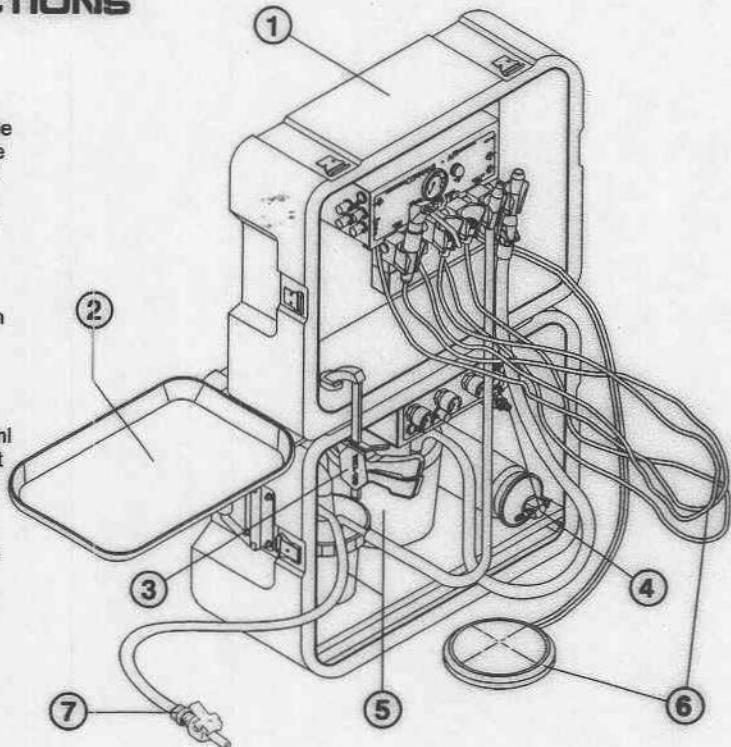
Lock the hinged lid open by attaching the Quick-Grip clamp to the case as shown figure below.

Remove stainless steel water supply bottle from storage and install on quick connect below water switch. Twist to remove lid, and fill with clean water.

Remove the high and low volume vacuum hose assemblies from storage and the HVE hose assembly into the quick disconnect on the lid of the large 1000ml waste reservoir, and the Saliva Ejector hose assembly into the quick disconnect lid of the small 1 pint Saliva Ejector reservoir. Hang vacuum valves in holders very head.

Remove air/water syringe and handpiece tubings from storage and hang in the appropriate holders on the delivery head. Remove disc foot control and place on the

Remove the air supply line from storage and attach to the unit first, and then the compressed air source. The air supply line is furnished in two 10'ft. sections with quick disconnects.



**Purging and Parging for Storage or Transport**

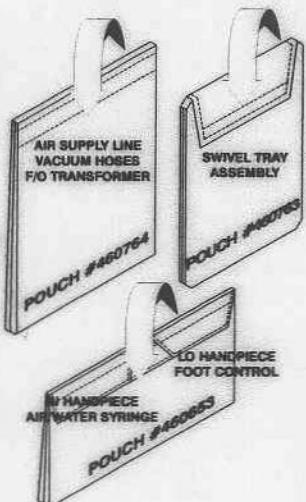
ADU-10CF unit should be purged of water to guard against freezing damage, and then properly packed before storage or transport. To purge the ADU-10CF system of water, depressurize and remove the water system cannister, then empty all waste bottles. Replace the water cannister and pressurize. Operate the three-way air/water syringe and both handpiece controls with water coolant "On" until all water is cleared from the system and just air is dispensed. Remove water cannister from quick-connect and lock into strap holder for storage.

Once water has been purged from the system, pack unit components into the proper storage pouch as follows:

Storage pouch #460764 is divided into two sections. Disconnect the two 10' sections of the air supply line from the unit, coil and store in one side of the pouch. Disconnect the HVE hose and Saliva ejector hose from the waste bottles in the unit, coil and store in the other side of the pouch. Remove the fiber optic transformer from the unit and store in the inside corner pocket in the center wall of the pouch.

Storage pouch #460763 holds the Instrument tray and swivel arm assembly. Loosen thumbscrew on swivel arm and remove arm from tray. Place swivel arm inside tray and slide into pouch. Store pouch underneath the vacuum bottle holder.

Storage pouch #460653 holds the foot control, handpiece tubing, and air/water syringe. Coil the foot control and lowspeed handpiece tubing and store in the right side of the pouch. Coil the highspeed handpiece tubing and air/water syringe tubing and store in the left side of the pouch.



**Functional Checklist:**

Verify that the ADU-10CF unit is functioning properly, connect the unit to a clean compressed air source providing 60-80 PSI:

Check the master On/Off toggle to the on position. The master pressure gauge and "On" indicator should indicate pressure. If the water system is attached and turned on, water cannister should pressurize.

Press foot control and observe drive air pressure from the highspeed line, and lowspeed line when selected.

Press the air/water buttons on the three-way syringe. Syringe should spray both air and water.

With vacuum waste containers attached to the system, lift the HVE and Saliva Ejector valve from their auto holders with lock out switch in the on position. Both should switch on, and vacuum generated at each valve.

**Pressure Setting Instructions**  
**Optimum Performance**

Turn MASTER switch to the 'ON' position. Master gauge should come up to system pressure.

Move Saliva Ejector valve from its auto holder and adjust saliva ejector gauge to 18 PSI.

Move HVE valve from its auto holder and adjust HVE Regulator to read 43 PSI. Press the Foot Control for the High Speed Handpiece and set running pressure to 65 PSI.

Verifying all of the above functions simultaneously, the Master system pressure should maintain 65+ PSI.

